

ABSTRACT OF THE DISCLOSURE

A process and device for single use, needle-free hypodermic, intradermal, subcutaneous and intramuscular injections of medicament with manually or pneumatic operated injector device using vacuum to stretch and properly hold the skin for horizontally to perpendicularly delivering to a human or animal a premeasured dose of medicament or vaccine by means of a thin high pressure liquid jet stream of sufficient velocity to penetrate the epidermis of the subject and depositing the medicament in the desired depths of tissue. Utilizing disposable single use, filled or pre-filled medicament ampules, the manually operated injector device provides the interface features for mounting the ampule, and the features for supplying the impulse force required to inject the medicament upon activation and safety interlock features to prevent inadvertent activation until the ampule is properly interfaced with the epidermis. A second embodiment that functions and operates in like manner, that utilizes external air pressure for activating several injector components in lieu of the manual operations of the primary embodiment and two methods for filling the single use ampule from an external supply.
